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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/888,541
Filing Date: June 26, 2001
Appellant(s): NAKAMAKI ET AL.

John R. Mattingly
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 1/30/08 appealing from the Office action mailed 4/30/07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,285,459	Koakutsu et al.	9-2001
6,570,605	Kashiwazaki	5-2003
6,504,619	Kageyama et al.	1-2003
6,804,016	Hashimoto et al.	10-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

1. Claims 1, 4, 5, 18, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,285,459 to Koakutsu et al.

Regarding claim 1, Koakutsu discloses a printer comprising a receiving buffer in which received print data and data are stored therein without analysis as received data in the order of control receipt (see Figs. 1 and 2, column 3 lines 55-63, and column 5 lines 60-64), an executing section configured to read the received data from the receiving buffer in the order of storage, and develop the received data into an image if the received data is the print data and execute a control command if the received data is a control command of the control data (see column 4 lines 4-55 and column 6 lines 1-

12 and 29-49), and a pre-processing section configured to pre-read the received data stored in the receiving buffer before the executing section reads the received data and, when a specific control command of the control data from the pre-read received data is found, the pre-processing section executes a procedure corresponding to the detected control command prior to the executing section (see column 6 lines 29-49).

Regarding claims 18 and 20, Koakutsu discloses a printer control method and computer-readable medium storing a program comprising the steps of: storing received print data and received control data as received data in a receiving buffer located within the printer in the order of receipt without analysis of the data (see Figs. 1 and 2, column 3 lines 55-63, and column 5 lines 60-64), reading the received data out of the receiving buffer in the order of storage (see column 4 lines 4-9), developing the print data into an image if the received data is the print data (see column 4 lines 10-18 and 31-40 and column 6 lines 46-49), executing a control command if the received data is a control command of the control data (see column 6 lines 1-7 and 29-45), pre-reading the received data stored in the receiving buffer prior to reading the received data, pre-executing procedure corresponding to a specific control command prior to the executing of the specific control command if the specific control command of the control data is detected by the pre-reading (see column 6 lines 29-49).

Regarding claim 4, Koakutsu further discloses a rewrite section which functions, when the pre-processing section has executed the specific control command of the control data, to rewrite a no-operation command into the portion of the executed control command in the receiving buffer (see column 4 lines 41-55 and column 6 lines 29-58).

Regarding claim 5, Koakutsu further discloses wherein the printer has only one logic channel for receiving the print data and the control data from a computer (see Fig. 1).

Claim Rejections - 35 USC § 103

2. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koakutsu as applied to claim 1 above, and further in view of Kashiwazaki (US 6,570,605).

Regarding claim 2, Koakutsu does not disclose expressly wherein the specific control command is a cancel command for canceling the print based on the print data received prior to the specific control command.

Kashiwazaki discloses wherein the specific control command is a cancel command for canceling the print based on the print data received prior to the specific control command (see column 5 lines 26-28), and when the pre-processing section finds the cancel command, the pre-processing section executes the cancel command prior to the executing section (see column 4 lines 25-43).

Koakutsu & Kashiwazaki are combinable because they are from the same field of endeavor, print control utilizing print data control commands.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the control cancel command, as described by Kashiwazaki, with the system of Koakutsu.

The suggestion/motivation for doing so would have been to ensure that a print job a user wishes to cancel is not printed and therefore there is no unnecessary waste of resources (i.e. paper, toner/ink, etc.).

Therefore, it would have been obvious to combine Kashiwazaki with Koakutsu to obtain the invention as specified in claim 2.

Regarding claim 3, Kashiwazaki further discloses a read-out position changing section which functions, when the pre-processing section has executed the cancel command, such that the position in the receiving buffer for the executing section to read the received data is jumped to the position next to the cancel command (see Fig. 4, column 4 lines 40-46, and column 5 lines 39-64, reference shows that after a control data command, such as a cancel command, is executed the analyzer moves on to the next set of control and print commands).

3. Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koakutsu and Kashiwazaki as applied to claim 2 above, and further in view of U.S. Patent No. 6,504,619 to Kageyama et al.

Regarding claim 6, Kashiwazaki discloses a read-out task configured to read out the receiving data from the receiving buffer (see column 4 lines 40-49) and a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data (see

column 4 line 40-column 5 line 33), the pre-processing section being realized by a pre-read execute processing incorporated in the main task, which reads out the received data from the receiving buffer, when the cancel command is found from the received data, to cancel the print based on the print data received prior to the cancel command (see column 4 lines 40-43 and column 5 lines 26-28 and 44-64).

Koakutsu and Kashiwazaki do not disclose expressly a read-out pointer, which after output, counts up the read-out pointer every time.

Kageyama discloses a read-out pointer, which after output, counts up the read-out pointer every time (see column 9 lines 16-23 and column 10 lines 5-19 and 40-43).

Regarding claims 8 and 11, Kashiwazaki discloses a read-out task configured to read out the receiving data from the receiving buffer (see column 4 lines 40-49) and a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data (see column 4 line 40-column 5 line 33), the pre-processing section being realized by assigning a pre-read task to the central processing unit in a predetermined order of priorities and executing the pre-read task, the pre-read task reading out the received data from the receiving buffer, when the cancel command is found from the received data, to cancel the print based on the print data received prior to the cancel command (see column 4 lines 40-43 and column 5 lines 26-28 and 44-64).

Koakutsu and Kashiwazaki do not disclose expressly a read-out pointer, which after output, counts up the read-out pointer every time.

Kageyama discloses a read-out pointer, which after output, counts up the read-out pointer every time (see column 9 lines 16-23 and column 10 lines 5-19 and 40-43).

Koakutsu, Kashiwazaki, & Kageyama are combinable because they are from the same field of endeavor, print control utilizing print data control commands.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the use of pointers, which is well known in the art, to sequentially store and execute control and print data, as shown by Kageyama, with the system of Koakutsu and Kashiwazaki.

The suggestion/motivation for doing so would have been to preserve the content of the command buffer and to reliably and accurately execute control and print commands (see column 6 lines 40-57 and column 9 lines 16-18 of Kageyama).

Therefore, it would have been obvious to combine Kageyama with Koakutsu and Kashiwazaki to obtain the invention as specified in claims 6, 8, and 11.

Regarding claims 7, 10, and 13, Kageyama further discloses wherein, if the cancel command has been detected by the pre-processing section, the read-out task moves the read-out pointer forward to the position next to the pre-read pointer (see column 9 lines 16-23 and column 10 lines 5-19 and 40-43).

Regarding claims 9 and 12, Kashiwazaki further discloses wherein the priority of assignment of the processing unit to the pre-read task is lower than the priorities to the read-out task and the main task (see column 4 lines 40-57, reference shows that execution of the control command takes priority over the reading of new input data).

4. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koakutsu as applied to claim 1 above, and further in view of U.S. Patent No. 6804016 to Hashimoto et al.

Regarding claim 14, Koakutsu does not disclose expressly wherein the specific control command is a paper size designation command which designates a particular paper size for printing the print data received subsequently to the paper size designation command, the pre-processing section functioning upon detection of the paper size designation command to determine beforehand whether the print on a sheet of paper of the size designated by the paper size designation command is possible, and functioning upon the print being impossible to inform a user of that fact.

Hashimoto discloses wherein the specific control command is a paper size designation command which designates a particular paper size for printing the print data received subsequently to the paper size designation command, the pre-processing section functioning upon detection of the paper size designation command to determine beforehand whether the print on a sheet of paper of the size designated by the paper size designation command is possible, and functioning upon the print being impossible to inform a user of that fact (see column 33 lines 2-15).

Regarding claim 15, Koakutsu does not expressly disclose wherein the pre-processing section functions upon detection of the paper size designation command to determine beforehand whether the printer has a paper tray of the size designated by the paper size designation command and, if the printer has no paper tray of the size

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designated by the paper size designation command, to inform a user of that fact, and to determine beforehand whether the paper tray of the size designated by the paper size designation command contains a sheet of paper and, if the paper tray of the size designated by the paper size designation command has no paper, to inform the user of that fact.

Hashimoto discloses wherein the pre-processing section functions upon detection of the paper size designation command to determine beforehand whether the printer has a paper tray of the size designated by the paper size designation command and, if the printer has no paper tray of the size designated by the paper size designation command, to inform a user of that fact, and to determine beforehand whether the paper tray of the size designated by the paper size designation command contains a sheet of paper and, if the paper tray of the size designated by the paper size designation command has no paper, to inform the user of that fact (see column 13 lines 34-42 and column 33 lines 2-15).

Koakutsu & Hashimoto are combinable because they are from the same field of endeavor, print control utilizing control commands.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the commands for detecting the presence/absence of paper and paper size located in a printer input bin, which is well known in the art, as described by Hashimoto, with the system of Koakutsu.

The suggestion/motivation for doing so would have been to increase productivity and print accuracy and decrease printer down time and printing stoppage and failure due to paper outages and paper size discrepancies.

Therefore, it would have been obvious to combine Hashimoto with Koakutsu to obtain the invention as specified in claims 14-15.

5. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koakutsu and Hashimoto as applied to claim 14 above, and further in view of Kashiwazaki and Kageyama.

Regarding claim 16, Hashimoto discloses whether the print on a sheet of paper of the size designated by the paper size designation command is possible (see column 33 lines 2-15).

Koakutsu and Hashimoto do not disclose expressly a read-out task configured to read out the receiving data from the receiving buffer according to a read-out pointer, output them, and count up the read-out pointer every time, a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data, the pre-processing section being realized by a pre-read execute processing incorporated in the main task, which reads out the received data from the receiving buffer according to a pre-read pointer, counts up the pre-read pointer every time, and functions, when the paper size designation command is found from the received data.

Kashiwazaki discloses a read-out task configured to read out the receiving data from the receiving buffer (see column 4 lines 40-49) and a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data (see column 4 line 40-column 5 line 33), the pre-processing section being realized by a pre-read execute processing incorporated in the main task, which reads out the received data from the receiving buffer (see column 4 lines 40-43 and column 5 lines 26-28 and 44-64), and informing a user of various messages and information (see column 5 line 67-column 6 line 2).

Kashiwazaki does not disclose expressly a read-out pointer, which after output, counts up the read-out pointer every time and whether the print on a sheet of paper of the size designated by the paper size designation command is possible.

Kageyama discloses a read-out pointer, which after output, counts up the read-out pointer every time (see column 9 lines 16-23 and column 10 lines 5-19 and 40-43).

Regarding claim 17, Hashimoto discloses whether the print on a sheet of paper of the size designated by the paper size designation command is possible (see column 33 lines 2-15).

Koakutsu and Hashimoto do not disclose expressly a read-out task configured to read out the receiving data from the receiving buffer according to a read-out pointer, output them, and count up the read-out pointer every time, a main task configured to acquire the received data from the read-out task, the main task developing the print

data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data, the pre-processing section being realized by assigning a pre-read task to the central processing unit in a predetermined order of priorities and executing the pre-read task, the pre-read task reading out the received data from the receiving buffer according to a pre-read pointer, counting up the pre-read pointer every time.

Kashiwazaki discloses a read-out task configured to read out the receiving data from the receiving buffer (see column 4 lines 40-49) and a main task configured to acquire the received data from the read-out task, the main task developing the print data into the image when the received data is the print data and executing the control command of the control data when the received data is the control data (see column 4 line 40-column 5 line 33), the pre-processing section being realized by assigning a pre-read task to the central processing unit in a predetermined order of priorities and executing the pre-read task, the pre-read task reading out the received data from the receiving buffer (see column 4 lines 40-43 and column 5 lines 26-28 and 44-64), and informing a user of various messages and information (see column 5 line 67-column 6 line 2).

Kashiwazaki does not disclose expressly a read-out pointer, which after output, counts up the read-out pointer every time and whether the print on a sheet of paper of the size designated by the paper size designation command is possible.

Kageyama discloses a read-out pointer, which after output, counts up the read-out pointer every time (see column 9 lines 16-23 and column 10 lines 5-19 and 40-43).

Koakutsu, Hashimoto, Kashiwazaki, & Kageyama are combinable because they are from the same field of endeavor, print control utilizing print data control commands.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the read-out task, main task, and pre-processing section, as described by Kashiwazaki, and the use of pointers, which is well known in the art, to sequentially store and execute control and print data, as described by Kageyama, with the system of Koakutsu and Hashimoto.

The suggestion/motivation for doing so would have been to preserve the content of the command buffer and to reliably and accurately execute control and print commands (see column 6 lines 40-57 and column 9 lines 16-18 of Kageyama) and to increase productivity and print accuracy and decrease printer down time and printing stoppage and failure due to paper outages and paper size discrepancies. Therefore, it would have been obvious to combine Kashiwazaki and Kageyama with Koakutsu and Hashimoto to obtain the invention as specified in claims 16-17.

(10) Response to Argument

Appellant's arguments regarding the rejection of claims 1-18 and 20 have been fully considered but they are not persuasive.

Appellant asserts, on pages 8-11 of the Appeal Brief, that Koakutsu (US 6,285,459) does not disclose the pre-processing section of claim 1 and the pre-reading and pre-executing steps of claims 18 and 20 because Koakutsu discloses that the data

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is read to find control commands of the control data by the components functioning as the execution section. The examiner respectfully disagrees as Koakutsu does disclose the pre-processing section of claim 1 and the pre-reading and pre-executing steps of claims 18 and 20. Particularly, Koakutsu shows a data receiving unit **4** (Fig. 1) that is made up of an interface **20** (Fig. 2) and a CPU **21** (Fig. 2), wherein the interface **20** contains a receiving buffer for receiving data from a host device **1** (see column 5 lines 60-64). Koakutsu further states that after receiving data from the host device **1** that the data receiving unit **4**, more specifically the CPU **21**, distinguishes between commands **11** and print data **12** and further analyzes the commands **11** to determine if the commands are an erasure command or a print control command. If the command is an erasure command then the command is sent to the erasure unit **6** and if the command is a print control command then the command is sent to the print controller **8**. In the case when the received data is print data **12** then the print data is sent to print image data generator **5** (see column 4 lines 3-55 and column 6 lines 1-12 and 29-49). So it can be seen that the CPU **21** is analogous to the pre-processing, pre-reading, and pre-executing limitations set forth in claims 1, 18, and 20 of the instant invention because the CPU **21** pre-reads the received data stored in the receiving buffer to determine if it is command data or print data and if the data is command data, such as an erase command then the command data is sent to an erasure unit **6** and a procedure is started to have the printing controller **8** execute such a command. The print controller **8** is analogous to the executing section of claims 1, 18, and 20 of the instant invention because the print controller **8** executes control commands received from the receiving

unit **4** or the erasure unit **6** and further controls execution of printing image data onto a recording medium. Therefore, Koakutsu shows two distinct sections, a pre-processing section (CPU **21**) and an executing section (print controller **8**) that function in the same way as the pre-processing section and executing section of claims 1, 18, and 20.

Further evidence of this can be found on pages 10 line 19 – page 11 line 3 of the appellant's specification in which a description of Fig. 4 is recited. The specification states that pre-read task **50** determines if data in the receiving buffer **22** is a cancel command and if so transmits to the main task **44** a message to execute such a command. Thus, Koakutsu discloses the same procedure set forth by the instant invention and therefore anticipates all the limitations set forth in claims 1, 18, and 20 of the instant invention.

Regarding claims 2, 4, and 5, the appellant states that these claims are patentable at least because they depend from an allowable base claim 1. However, claim 1 is not allowable for the reasons set forth above and therefore the rejection of claims 2, 4, and 5 still stand.

Appellant asserts, on pages 13-14 of the Appeal Brief, that Kashiwazaki (US 6,570,605) does not disclose the read-out position changing section of claim 3. The examiner respectfully disagrees as Kashiwazaki does disclose such a feature. Particularly, Kashiwazaki states that data the job controller **306** analyzes the job control data of which a "job cancel command" is a part of and executes a process based on the content of the received job. Kashiwazaki further states that PDL data is acted on based

on the order of storage (order of reception) showing that the reading out of the job control data (command data) is moved from the currently processed job control data to the next awaiting job control data and therefore Kashiwazaki discloses jumping to the next position after the cancel command to process and execute the next command received as set forth in claim 3 of the instant invention.

Appellant asserts, on page 14 of the Appeal Brief, that Kashiwazaki (US 6,570,605) does not disclose a read-pointer for the read-out task and a pre-read pointer as claimed in claims 6-13. The examiner agrees that Kashiwazaki fails to disclose such features, however, Kashiwazaki was not relied upon for these features, and instead Kageyama was relied upon as Kageyama discloses such features (see column 9 lines 16-23 and column 10 lines 5-19 and 40-43 of Kageyama).

Regarding claims 14-15, the appellant states that these claims are patentable at least because they depend from an allowable base claim 1. However, claim 1 is not allowable for the reasons set forth above and therefore the rejection of claims 14-15 still stand.

Regarding claims 16-17, the appellant states that these claims are patentable at least because they depend from an allowable base claim 1 and intermediate claims 14 and 15 and for the same reasons as claims 6-13. However, claims 1 and 6-15 is not allowable for the reasons set forth above and therefore the rejection of claims 16-17 still stand.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Mark R. Milia/

Examiner, Art Unit 2625

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